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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO	
09/770,804	01/26/2001	Paul W. Dent	000875	8250	
7:	590 05/14/2003				
David E. Bennett Coats & Bennett, P.L.L. C. 1400 Crescent Green, Suite 300			EXAMINER		
			BOCURE, TESFALDET		
Cary, NC 275	11		ART UNIT	PAPER NUMBER	
			2631	12	
•			DATE MAILED: 05/14/2003		

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

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Examiner - The MAILING DATE of this communication appears on the cover sheet with the correspondence address → Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ② MONTH(S) FROM THE MAILING DATE of THIS COMMUNICATION. Extensions of time may be available under the provisions of 37 CPR 1.138(a). In or event, however, may a reply be sinely filled If the period for may period advance is best han the; (30) days, a reply whith the statutory minima or threy, (30) days will be considered timely. If NO period for reply is appetited above, the maximum statutory prior of all papers SK (8) MONTHS from the mailing date of this communication. If NO period for reply is appetited above, the maximum statutory prior of all papers and will apply and will expire SK (8) MONTHS from the mailing date of this communication. Any reply replicate by the Office internal home mornis after the mailing date of this communication, even if timely filled, may reduce a may restrict them department. See 37 CPR 1.704(b). Status 1) ② Responsive to communication(s) filled on 26 January 2001. 2a) ☐ This action is FINAL. 2b) ② This action for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) ② Claim(s) 1_40 islare pending in the application. 4a) ② The above claim(s)		Application No.		Applicant(s)					
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A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. - Extractions of times may be available under the provisions of 37 CFR 1.35(a). In no event, however, may a reply be timely filed - Extractions of times may be available under the provisions of 37 CFR 1.35(a). In no event, however, may a reply be timely filed - Extractions of times may be available under the provision of 37 CFR 1.35(a). In no event, however, may a reply be timely filed - If No period for engly is specified above, he maximum statutory parted will apply and vill aspire SIX (6) MONTH'S from the mailing date of this communication, or the provision of CR1 and a provision of Claims - All Claim(s) 3.40 is/are pending in the application. - Application Papers - Provision of Claims - Application is objected to by the Examiner. - Application Papers - Provision of equal to the provision of the provision of the drawing(s) filed on									
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. Eatherised internary be arrivable under the provision of 3° CFR 1.35(a), in no event, however, may a reply be timely filed Eatherised in time may be arrivable under the provision of 3° CFR 1.35(a), in no event, however, may a reply be timely filed If the period for reply is specified above is less than thirty (30) days, a reply whilen the allaturory minimum of thirty (30) days, will be considered profit or reply will, by a statutory minimum of the timely (30) days, will be considered profit or reply will, by a statutory minimum or the mailing date of this communication. Finally be reply signified to reply is specified above in the realizing date of this communication, went if may read the same department and dustrement and under the mailing date of this communication, went if may read the same department and dustrement. See 3° CFR 1.70(b). Status 1) Responsive to communication(s) filed on 26 January 2001. 2a) This action is FINAL. 2b) This action is non-final. 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under £x parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) Claim(s) 1-40 is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn from consideration. 5) Claim(s) 3-40 is/are rejected. 7) Claim(s) 3-40 is/are rejected to. 8) Claim(s) 3-40 is/are rejected to. 8) Claim(s) 3-40 is/are rejected. 7) Claim(s) 3-40 is/are rejected. 10 The drawing(s) filed on is/are: a) cocepted or b		ears on the cove	r sneet with the c	orresponaence ad	iaress				
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DETAILED ACTION

Information Disclosure Statement

 The Examiner has approved the Information Disclosure Statements (IDSs) received on 1/26/01 and 12/09/02 and the intitialed copies (two copies) of the 1449 are attached with this correspondence.

Claim Rejections - 35 USC § 103

- 1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 2. Claims rejected under 35 U.S.C. 103(a) as being unpatentable over Wright (US patent number 4.422,047, newly cited).

Wright teaches a transceiver unit (see figure 2) for adaptively transmitting and receiving over a plurality of transmitting and receiving frequencies comprising: a means for balancing the impedance of the antenna to that of the amplifier (see col. 1, lines 11-36); a plurality of band pass filters (60) for filtering the received plurality of frequency and an adaptive amplifier for adaptively amplifying the signal to be transmitted or received according to the frequency band as in claims 1-3. The number of the amplifiers (102 and 70) is less than the number of the band pass filter (60) as in claim 4.

What Wright fails to teach is that the transceiver as having a plurality of amplifiers as in claim 1. However the system of **Wright** uses a single adaptive amplifier for adaptively amplifies the signal to be transmitted or received according the frequency spectrum as is the case in the instant application. Therefore, it would have been obvious to one of an ordinary skill in the art to use the single adaptive amplifier as oppose to claimed plurality of amplifiers for accommodating the plurality of transmit and receive frequencies at the time the invention was made.

Allowable Subject Matter

- Claims 34-40 are allowed.
- 4. Claims 5-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
- The following is a statement of reasons for the indication of allowable subject matter: The claimed subject matter in claims 5-40 are allowable because the prior art does not teach or fairly suggest the claimed "wireless communication devices for transmitting signals in a first plurality of transmit frequency bands and for receiving signals in a second plurality of receive frequency bands, the wireless communication device comprising: an adjustable matching network comprises a transmit band matching network for each of the plurality of transmit frequency bands each of the transmit band matching networks connected to a respective one of the third plurality of transmit power amplifiers and selectively connectable to the antenna, wherein each of the transmit band matching networks are configured to optimize antenna impedance matching for its corresponding transmit frequency band as in claim 5; wherein the adjustable matching network comprises a switch selectively connecting the antenna to either (a) one of the third plurality of transmit power amplifiers, or (b) one of the fourth plurality of receive band pass filters, the switch operating during frame periods of a Time Division Multiple Access signal format associated with the wireless communications network as in claim 6; wherein the adjustable matching network comprises a first bank of electromechanical switches selectively connecting the antenna to one of the third plurality of transmit power amplifiers, the first bank of electromechanical switches operational to change the antenna selective connection in response to a change in selection of one of the first plurality of transmit frequency bands as in claim 8; wherein the adjustable matching network comprises a second bank of electromechanical switches selectively connecting the antenna to one of the fourth plurality of receive band pass filters, the second bank of electromechanical switches operational to change the antenna selective connection in response to a change in selection of one of the second plurality of receive frequency bands as in claim 10; wherein the adjustable matching network comprises a receive band matching network for each of the second plurality of receive frequency

bands, each of the receive band matching networks connected to a respective one of the fourth plurality of receive band pass filters and selectively connectable to the antenna, wherein each of the receive band matching networks are configured to optimize antenna impedance matching for its corresponding receive frequency band as in claim 13; wherein the adjustable matching network comprises a variable matching network connected to the antenna; and a transmit/receive switch having common, receive output and transmit input terminal, and operable between transmit and receive positions, the transmit/receive switch having its common terminal connected to the variable matching network, the transmit/receive switch receive output terminal selectively connectable to a select one of the fourth plurality of receive band pass filters, and the transmit/receive switch transmit input terminal selectively connectable to a select one of the third plurality of transmit power amplifiers as in claim 15; wherein the adjustable matching network comprises a transmit/receive switch having common, receive Output and transmit input terminals, and operable between transmit and receive positions, the transmit/receive switch having its common terminal connected to the antenna, a variable receive matching network connected to the receive output of the transmit/receive switch and selectively connected to a select one of the fourth plurality of receive band pass filters; and a variable transmit matching network connected to the transmit input terminal of the transmit/receive switch and selectively connected to a select one of the third plurality of transmit power amplifiers as in claim 24; and multiple transmit and receive frequency bands using Time Division Multiple Access (TDMA) signal formats, the wireless communications device comprising, a control processing unit receiving and processing the mismatch indication signals and providing adjustment control signals to the variable matching network during a portion of the TDMA frame period not utilized by the wireless communications device for transmission as in claim 34.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tesfaldet Bocure whose telephone number is (703) 305-4735. The examiner can normally be reached on Mon-Thur (7:30a-5:00p) & Mon.-Fri (7:30a-5:00p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 305-3988 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

T.Bocure May 12, 2003 Primary Examiner
Art Unit 2681